

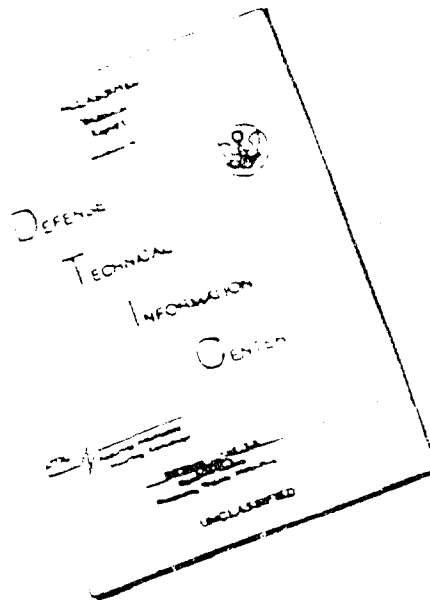
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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) THE GOAL OF MOTIVATION IN THE MILITARY: SOLDIER SATISFACTION OR SOLDIER PERFORMANCE		5. TYPE OF REPORT & PERIOD COVERED Final 9 June 1978
7. AUTHOR(s) Major Allison C. Patterson		6. PERFORMING ORG. REPORT NUMBER Student, C&GSC
9. PERFORMING ORGANIZATION NAME AND ADDRESS U.S. Army, Command & General Staff College		8. CONTRACT OR GRANT NUMBER(s) (2) NW
11. CONTROLLING OFFICE NAME AND ADDRESS		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS (11) 9 Jun 78
14. MONITORING AGENCY NAME & ADDRESS (If different from Controlling Office)		12. REPORT DATE Final Report - 9 June 1978
		13. NUMBER OF PAGES (12) 95p.
		15. SECURITY CLASS (of this report) Unclassified
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release.		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES DDC AUG 22 1978		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Troop Motivation, Soldier Motivation Troop Performance, Soldier Performance AWOL		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Most studies to date dealing with worker motivation have concentrated on worker satisfaction, since most managers and researchers apparently assume a positive correlation between worker satisfaction and worker performance. This study was designed to by-pass this assumption and determine the correlation between the junior enlisted soldier's (E-1 through E-4) perceptions of 18 job-related factors, his/her level of performance and --		

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his/her level of absenteeism (AWOL). Again, this study approaches only the level of response-performance-AWOL correlations with no attempt at supporting or refuting the satisfaction-leads-to-performance assumption.

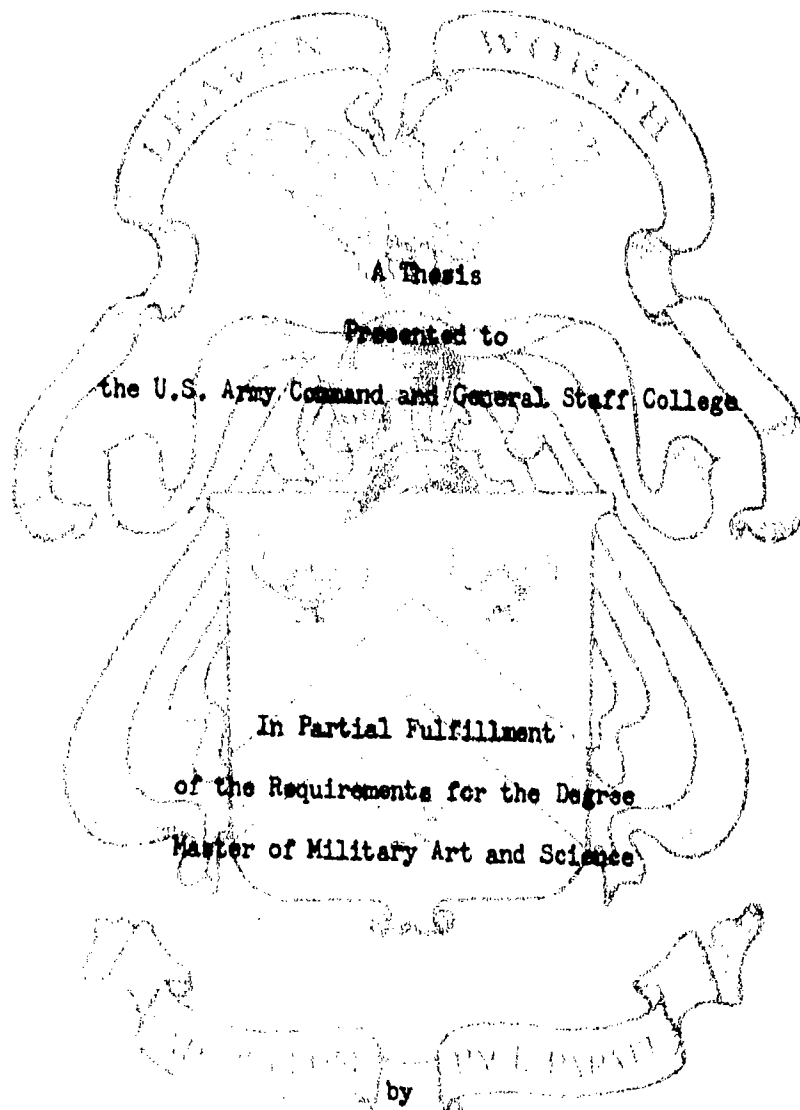
Analysis revealed:

- . A positive correlation between level of response and performance.
- . Considerably higher response-performance correlations for Combat Arms and Combat Service Support than for Combat Support.
- . No overall correlation between level of response and AWOL. However further analysis revealed a negative correlation between AWOL and three out of four factor sub-scales.
- . A negative correlation between level of performance and AWOL.

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THE GOAL OF MOTIVATION IN THE MILITARY:
SOLDIER SATISFACTION OR SOLDIER PERFORMANCE?



A Thesis
Presented to
the U.S. Army Command and General Staff College

In Partial Fulfillment
of the Requirements for the Degree
Master of Military Art and Science

by

Allison Crawford Patterson

June 1978

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MASTER OF MILITARY ART AND SCIENCE

THESIS APPROVAL PAGE

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Satisfaction or Soldier Performance?

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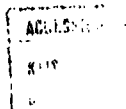
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Accepted this 15th day of May 1978 by *[Signature]*,

Director, Master of Military Art and Science.

The opinions and conclusions expressed herein are those of the individual student author and do not necessarily represent the views of either the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)



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CHAPTER I

THE PROBLEM AND ITS SETTING

INTRODUCTION

For as long as management has been identified as a distinct art or science, managers have wrestled with the question: What causes an employee to perform? Further, what causes the quality and quantity of that performance to improve or deteriorate? Although this problem has received much attention in the business world, through such studies as the "Hawthorne" type and others, it has not been adequately addressed in the military environment. The purpose of this study is to approach the performance question in this neglected military area by determining how U.S. Army junior enlisted soldiers (E1 through E4) perceive various motivational factors of their job, and how these perceptions are correlated with performance and AWOL. Therefore, the ultimate goal of this study is to provide the Army commander/manager with an insight as to how junior enlisted soldiers' perceptions of their jobs are correlated with their level of job performance and rate of absenteeism (AWOL).

Recently, and for good reason, the questions of what causes an employee to perform and what causes that performance to improve or deteriorate have received increased attention by both managers and organizational researchers. I believe one has only to ask first-line supervisors what their most taxing work problems are for evidence of the

importance of these questions to management. Judging from the volume of articles relating to motivation in psychological and management journals, the problem exists in all fields, civilian as well as military.

Several factors appear to account for the emergence of motivation as a focal point of interest. First, managers and organizational researchers have recently begun to direct more attention to the overall BEHAVIORAL requirements of an organization. Also, in addition to financial and physical resources, every organization must obviously have people in order to function. Katz and Kahn (1966) posited that organizations have three behavioral requirements: (1) people must be attracted not only to join the organization but also to remain in it; (2) people must perform the tasks for which they are hired, and must do so in a dependable manner; and (3) people must go beyond this dependable role performance and engage in some form of creative, spontaneous, and innovative behavior at work. In short, for an organization to be effective, it must come to grips with stimulating both the decision to participate and the decision to produce at work.

A second and related reason for the increased attention is the pervasive nature of the concept of motivation. By this I mean, the question of why people behave as they do on the job interacts with the entire field of organizational variables. Therefore an understanding of motivation is essential to the comprehension of the effects other variables such as leadership style, job redesign, and salary have on the overall effectiveness of the organization.

Third, the ever-tightening financial and manning constraints placed on organizations have forced management to look for new mechanisms to increase, and in some cases just to maintain, their level of organizational effectiveness and efficiency. The "slack" that organizations could once rely on is no longer available. This environment of increasing constraints is particularly true for the military manager. The change to an all-volunteer Army and the generally austere financial and manning levels have given the problem added urgency and focus. Because of these constraints, management must insure that it derives greater benefit from those resources available to it--including human resources. In short, organizational effectiveness becomes, to some degree, a question of management's ability to motivate its employees to direct a reasonable effort toward the goals of the organization.

A fourth reason is the level of technology required for operation. The increasing sophistication of hardware does not lessen the requirement for quality employee performance. On the contrary, these new complex machines require a level of performance previously unattained--or possibly unattainable. The net result is that they have increased the requirement for a greater number of people to work at peak capacity to apply the technology required for success. For example, the infantryman of today cannot be satisfied with merely surviving and maintaining proficiency with his rifle. He must be capable of operating and maintaining a highly complex weapons system which in many cases includes an armored personnel carrier and either a TOW or DRAGON anti-tank weapon with associated guidance and support equipment.

Finally, while financial and physical resources have usually been planned on a long-term basis, only recently have organizations begun to apply the same perspective to their human resources. In the military this trend can be seen in the revitalized training procedures, whereby the individual soldier can clearly define his job skill requirements and can systematically work toward promotion through job qualification.

In summary, there are several reasons why motivation is getting more attention by both managers and those who study organizations. In any case, the complexity of the employee motivation phenomenon is at least keeping pace with the growing complexity of modern hardware technology. Now a look at motivation.

The term "motivation" was originally derived from the Latin word *MOVERE*, which means "to move". Since this is obviously an inadequate definition for our purpose, the following are brief selections which attempt to get at various aspects of the process by which human behavior is activated:

"... the contemporary (immediate) influences on the direction, vigor and persistence of action." (Atkinson, 1964)

"... a process governing choices made by persons or lower organisms among alternative forms of voluntary activity." (Vroom, 1964)

"... to steer one's actions toward certain goals and to commit a certain part of one's energies to reaching them." (Gellerman, 1963)

"... A motive is a restlessness, a lack, a yen, a force. Once in the grip of a motive, the organism does something. It most generally does something to reduce the restlessness, to remedy the lack, to alleviate the yen, to mitigate the force." (Sanford and Wrightsman, 1970)

Three elements appear common to these and most other definitions of motivation: (1) the element that energizes human behavior; (2) the

element that directs or channels such behavior; and (3) the element relating to how this behavior is maintained or sustained. These three common denominators usually appear, in some form, in all motivation research. Based on these three elements, a model of motivation can be shown to consist of four basic building blocks: (1) needs or expectations; (2) behavior; (3) goals; and (4) some form of feedback. However, this model is far from simplistic in that individuals possess--in varying strengths--a multitude of needs, desires and expectations.

Dunnette and Kirchner (1965) identified several complications in attempting to assess motivation, not the least of which is that motives can only be INFERRED; they can not be seen. This means that when we see soldiers putting in the extra time, we really do not know if they feel obligated to do the work, are "buckling" for promotion, or merely enjoy the work. Still speaking of inferring motives from observations, Hilgard and Atkinson (1967) give four reasons why this process is difficult: (1) any single act may express several motives; (2) motives may appear in disguised forms; (3) similar motives may be expressed with different behavior; and (4) cultural and personal variations may significantly change the modes of expression. The model is further complicated by the multitude of needs, desires, and expectations a person may experience simultaneously, the differences among individuals as to which motives they select over others, and the intensity with which they pursue such motives.

Further, behavior is usually considered as being of two types: INSTRUMENTAL or CONSUMMATORY. Instrumental behavior is directed at the means to certain ends; consummatory behavior is directed at the ends

themselves. For example, soldiers who work hard and put in many hours of off-duty time in maintaining their equipment may do so either because they want to impress the boss and possibly be promoted (an instrumental act) or simply because they enjoy working (a consummatory act). In any case, one can readily see the immense complexity of the human motivation process and the difficulty of predicting human behavior. Chapter III, Literature Review, will cover the major contemporary motivation theories and the research done in each. However, here I would like to take a brief look at the early work in motivation; the beginning of motivation as a concept.

Early Thoughts on Motivational Theories

The concept of motivation dates back at least to the Greek philosophers who discussed the principle of HEDONISM, which generally means the tendency of individuals to seek pleasure and avoid pain. It was later picked up by such philosophers as John Locke, Jeremy Bentham, John Stuart Mill and Claude-Louis Bernoulli. Bentham termed the principle "hedonic calculus" to describe the way people calculate the pros and cons of various acts of behavior. As motivation theory moved from the realm of philosophy to psychology in the late Nineteenth Century, it became apparent that several serious problems existed with hedonism. As pointed out by Vroom (1964, p. 10):

There was in the hedonistic assumption no explicit specification of the types of event which were pleasurable or painful, or even how these events could be determined for a particular individual, . . . In short, the hedonistic assumption had no empirical content and was untestable. Any form of behavior could be explained, after the fact, by postulating particular sources of pleasure or pain, but no form of behavior could be predicted in advance.

Under the category of INSTINCT THEORIES, psychologists such as William James, Sigmund Freud and William McDougall did not reject hedonism, but added two variables which they considered essential to understanding behavior: Instinct and unconscious motivation. These psychologists differed as to their specific concepts: McDougall saw instinct as "inherited or innate" and goal-directed; James thought of instinct and unconscious motivation as causing "blind and mechanical action"; while Freud emphasized motivation from the unconscious level. By this Freud was saying that the person is largely motivated by forces unknown even to the person himself. The downfall of this group of theories seems to have been the proliferation of identifiable instincts--nearly six thousand of them.

The questioning of instincts and the unconscious as automatic or learned led to the development of DRIVE THEORIES. The dominant figure here was Hull with his "Laws of Learning" (Hull, 1943). His formula was: $\text{Effort} = \text{Drive} \times \text{Habit}$.

Drive was defined by Hull as an overpowering influence which determined the intensity of behavior, and which theoretically increased along with the level of deprivation. Habit was the strength of relationship between past stimulus and response (S-R). Hull later modified his formula to account for anticipated pleasure or future goals: $\text{Effort} = \text{Drive} \times \text{Habit} \times \text{Anticipation}$.

The third major group of psychological approaches to motivation is the COGNITIVE APPROACHES. While drive theories considered habit (past) to be the key element of motivation, cognitive theories

keyed on beliefs, expectations and anticipations (future). The prominent names here are Edward Tolman and Kurt Lewin. Although Tolman primarily studied animal behavior and Lewin studied human behavior, they agreed on the position that conscious decisions about future behavior are based primarily on cues from the present environment, not from past associations (habits). The term cognitive later came to mean EXPECTANCY-VALENCE which was expressed by Tolman (1959) in the formula: $\text{Effort} = \text{Expectancy} \times \text{Valence}$. Expectancy dealt with the potential outcomes of various acts of behavior and valence with the expected value of each potential outcome.

Early Thoughts on Management Problems

While the preceding brief overview of the early evolution of psychological theories is necessary to see the complexity of human behavior, the application of some of early managerial approaches to work behavior are equally important.

Prior to the early 1900s, the primary form of "motivation" was fear of punishment or loss of job. As the complexity and large scale of manufacturing increased the worker-patron relationship of the "family business" this pattern was replaced by the more sterile and impersonal relationship between employees and their company. Therefore, the industrial revolution was also a social revolution. This new environment created a need for very different concepts of management. The first of these is the traditional model generally attributed to Frederick W. Taylor.

The traditional model is based on the assumption that: Work is inherently distasteful to most people; what they do is less important than what they earn for it; and for want of one handle work which requires creativity, self-direction, or self-control (Miles, Porter and Craft, 1966). Based on these assumptions, management's policies were: the manager's basic task is to closely supervise and control his subordinates; divide tasks into simple, repetitive, easily-learned operations; and establish detailed work routines and procedures, and enforce these firmly but fairly. As for the employee's expectations: people can tolerate work if the pay is decent and the boss is fair, and if tasks are simple enough and people are closely controlled, they will produce up to standard. This "bureaucratic" model lasted several years. However the "efficient" factories were found to be efficient that fewer workers were needed. This factor along with the rise of unionism began to slow the previously unparallel growth of production/output. As a result, organizations began to question the motivational assumptions along the lines of "people are lazy and need to be controlled"; hence the development of the Human Relations Model.

The first work on the Human Relations Model began in the late 1920s with Mayo (1933), Lippitt (1938), and McGregor and Dickson (1939). As stated by Bendix (1956), the view of workers as human beings came to be supported by the discovery of quality, poor craftsmanship, unresponsiveness, and other factors. According to Miles, Porter and Craft (1966), management's policies were: workers must be able to feel useful and important; people desire to belong and to be recognized as individuals;

and these needs are more important than salary in motivating people to work. Management's policies and the manager's basic task is to make each worker feel useful and important; the manager should keep his subordinates informed and listen to their objections and plans; and the manager should allow his subordinates to exercise some self-direction and self-control on routine matters. As for management's expectations of employees, sharing information with subordinates and involving them in routine tasks will satisfy their basic needs to belong and to feel important, and satisfying these needs will improve morale and reduce resistance to formal authority--subordinates will "willingly cooperate". Actually, the human relations model has been challenged, both for being oversimplified and incomplete, as well as being as manipulative of employees as the traditional model.

As a result of the criticisms of the human relations model and the general evolution of thought in the field, a group of theories were formed in the 1950s and 1960s. One of these is the HUMAN RESOURCES Model. Included are Maslow's (1954) hierarchy of needs, Herzberg's (1955) "Human Resources Model". Equally important is the work of Porter and Craft (1966) comparison of models, and the work of Herzberg and Maslow on the human resources model: Work is not inherently satisfying; people want to contribute to meaningful goals which are challenging; people want to do what they can exercise far more energy and creativity than their job demands. As to policies: The manager should make use of his "untapped" human resources; the manager should create an environment in which all members may contribute to the organization's goals; and the manager

must encourage full participation on important matters, continually broadening subordinates' self-control and self-direction. Management expects that: Expanding subordinate influence, self-direction, and self-control will lead to direct improvements in operating efficiency; and work satisfaction may improve as a "by product" of subordinates making full use of their resources. This model has only recently been accepted and adopted by some organizations.

To put the three models in perspective as to extent of usage, it appears that the trend is from the traditional, through the human relations, to the human resources model. This is not to say that any particular organization will wholly embrace one model to the exclusion of the others, or that any particular organization will necessarily move from one model to the other. In fact, an organization may use a hybrid of the three models, designed for its specific needs.

It is interesting to compare the evolution of military management policies with the management models. From at least the early 1900s to the early 1960s, the Army's mode of management was clearly comparable to the traditional model's assumption that few want or can handle work which requires creativity, self-direction or self-control. The thought then was, "do it because I said do it," regardless of the need or application of common sense. As for the human relations model, the Army was a few years behind the civilian recognition and adoption of human relations measures. In fact, it was not until the early 1970s that the Army really began pushing human relations considerations to the lowest levels of management, and then primarily as a result of ethnic conflicts and drug-

related motivation problems. However, if Army management follows through on the policy presently being stated, we will be ahead of the civilian community. Specifically, part of this policy is the "new" realization that a commanding general cannot personally supervise and provide specific guidance for each leader down through squad leader level. As a result of this awakening, the Army is implementing a training program that will let every leader plan his own training program to fit the needs of his soldiers. Also, the soldiers now have the tools to self-train on specific job skills and advance as far as their desire and ability will carry them. The Army is well on the way to adopting the main assumptions of the human resources model: Work is not inherently distasteful; people want to contribute to meaningful goals which they have helped establish; and most people can exercise far more creative, responsible self-direction and self-control than their present job demands.

With the preceeding brief but representative overview of the evolution of psychological motivation theories and management models, it is now appropriate to address the problem. To avoid making this introductory chapter too voluminous, I have mentioned only the early work in motivation theories; current theories are fully covered in Chapter II, Literature Review.

SITUATION LEADING TO THE PROBLEM

Although there has been much motivation research during the past 15 - 20 years, managers, whether civilian or military, still do not have a workable guide as to what is associated with high, or even acceptable performance. I believe this dilemma is due to the direction taken by

motivation research in generally considering worker satisfaction as the ultimate goal. The implied assumption in current motivation research is that a satisfied worker will perform better than will an unsatisfied worker, for both quantity and quality of output. Likewise, the military focus has historically been on the concept of soldier satisfaction as the prime indicator of soldier effectiveness. Commanders seem to assume that if they can optimize, or at least raise, the level of satisfaction their unit will be more effective. I do not believe this assumption to be either universally true or supported by research. However, by this I do not intend to imply that satisfaction is not important, or even that it may not be necessary to the effectiveness of a soldier or a unit. Rather, I question the seemingly sacred assumption that if a soldier or unit possesses a high level of satisfaction, a high level of job performance is assured. This assumption has resulted in considerable effort and expense at job enrichment and employee benefits, with a resulting lack of analysis as to actually how military managers can cause their soldiers to perform. Again, military managers have given undue emphasis to higher salary as a cure for job dissatisfaction; with the related assumption that the increased satisfaction will cause higher or satisfactory performance. I question this assumption, and recommend the salary-satisfaction question for further research and analysis.

However, due to the considered "obvious" connection between soldier satisfaction and rate of absenteeism (AWOL), the military leader is probably more excusable in this practice than is his civilian counterpart. For the military leader, a high rate of AWOL reflects on his "leadership"

ability, whereas for the civilian manager, high worker absenteeism can more readily be seen as caused by distasteful characteristics of the job or less-than-admirable ambition of the workers.

The importance of worker satisfaction cannot be denied. For a worker to provide a sustained level of satisfactory or high performance, I believe that he/she must have at least an acceptable level of satisfaction. However, studies attempting to get at the ultimate goal of PERFORMANCE through the unobservable state of mind SATISFACTION, are inconclusive in that my literature search indicated no cause-effect connection between these two variables. If satisfaction is correlated with performance, one does not necessarily precede the other. In other words, it is just as tenable for satisfaction to be a result of high performance as vice-versa. Further, satisfaction and high performance may be caused by still other variables. It appears that most of the motivational research to date has at best given the manager some guidance as to how to have HAPPY workers, but very little advice as to how to predict and influence the very activity for which the worker is paid: PERFORMANCE.

In attempting to at least partially fill the above void, I developed a questionnaire of human/job factors based on Herzberg's Motivation-Hygiene (or Two-Factor) Theory and Lawler's Expectancy-Valence Theory. These two theories are fully covered in Chapter II. This questionnaire is sub-divided into four sub-scales: Motivators (Herzberg's Motivation-Hygiene Theory), Hygienes (Herzberg), Relatives (Herzberg's relations with others) and Expectancy-Valence questions. This survey device provides for a soldier to register his/her degree of agreement

with each human/job factor on a scale of 1 to 9. Also, the soldier's immediate supervisor rates the soldier's level of performance on a 1 to 9 scale, and reports the number of times during the preceding month that the soldier has been absent from the job without proper excuse. The soldiers' and supervisors' responses are analyzed as outlined in subproblems 1 through 10 below. This analysis gets at a direct correlation between a soldier's rated performance and his/her perceptions of various human/job factors, without being routed through an unobservable state of mind such as satisfaction or morale. The research device and procedure are further explained in Chapter III, RESEARCH METHOD. I emphasize that although I make opinion observations as to possible/probable causation at each step of analysis, the purpose of this thesis is to identify significant correlations which can be used by military managers.

The research population for this study is approximately 150 soldiers. They are divided into the three Army disciplines of: Combat Arms (49), Combat Support (51) and Combat Service Support (56). This structure allows an extensive analysis among the three disciplines, four subscales of response (Motivators, Hygienes, etc.), performance ratings, and rate of AWOL. Each step of analysis is described in subproblems 1 through 10 below.

PROBLEM

The purpose of this study is to determine whether, and to what extent, soldiers' perceptions of various human/job factors (on their present

jobs) are related to their performance level (on their present jobs) and AWOL rate.

- . First Subproblem. How do soldiers' overall level of response correlate with their rated level of performance?
- . Second Subproblem. How do soldiers' level of response, on each question, correlate with their rated level of performance?
- . Third Subproblem. How do soldiers' level of response, on each question, by discipline, correlate with their rated level of performance?
- . Fourth Subproblem. How do soldiers' level of performance correlate with level of response, by sub-scale?
- . Fifth Subproblem. How do soldiers, as a discipline, compare as to overall level of response?
- . Sixth Subproblem. How do soldiers, as a discipline, compare as to level of response within sub-scale?
- . Seventh Subproblem. How does AWOL level relate to overall level of response?
- . Eighth Subproblem. How does AWOL level relate to level of response by sub-scale?
- . Ninth Subproblem. How does level of performance relate to level of AWOL?
- . Tenth Subproblem. What are the correlations among the 18 questions as to level of response?

HYPOTHESES

. First Hypothesis. That soldiers' overall level of response is positively correlated with their level of performance.

. Second Hypothesis. That soldiers' level of response, on each question, is positively correlated with their level of performance.

. Third Hypothesis. That soldiers' level of response, on each question, by discipline, is positively correlated with their rated level of performance.

. Fourth Hypothesis. That soldiers' level of performance is positively correlated with level of response, by sub-scale.

. Fifth Hypothesis. That there are no significant differences among disciplines as to level of response.

. Sixth Hypothesis. That there is no significant difference among disciplines as to level of response, within each sub-scale.

. Seventh Hypothesis. That there is a negative correlation between AWOL and overall level of response.

. Eighth Hypothesis. That there is a negative correlation between AWOL level and response level within each sub-scale.

. Ninth Hypothesis. That there is a negative correlation between level of performance and level of AWOL.

. Tenth Hypothesis. That there is a positive correlation among the 18 questions.

DELIMITATIONS

The study will not attempt to speculate as to the soldiers' state of mind (satisfaction, morale, etc.).

The study will be limited to soldiers in grades E1 through E4, performing a job which lends itself to evaluation of quantity and quality of performance. This grade limitation is because I am focusing on "worker" motivation rather than supervisor motivation.

The study will not attempt to analyze performance by managerial or supervisory personnel.

The study will not attempt to associate AWOL with turn-over of personnel (soldiers who do not re-enlist), because it is unsafe to assume that these two types of behavior are caused by the same variable(s).

The study will analyze the performance of soldiers in a "peace-time" environment, under simulated combat conditions, at best. Therefore, the study results may not be directly applicable to a combat situation.

DEFINITION OF TERMS

. Performance. A measurement of quantity, quality and reliability of output. With full consideration of past speculation as to the difficulty of assigning an overall performance rating, considering the varying demands of different jobs (creativity, physical endurance, unquestioning obedience, etc.), I believe most supervisors can, without difficulty, clearly differentiate among their subordinates as to overall performance.

. Absenteeism. Unscheduled/unexcused absence from the job for more than one-half day without a legitimate reason (emergency, accident, etc.). Absenteeism is used synonymously with AWOL (absent without leave).

. Human/Job Factors. Aspects of the job and the total work environment that potentially affect performance. These are primarily the factors in Herzberg's Motivation-Hygiene Theory and Lawler's Expectancy/Valence Theory.

. He/She. Throughout this thesis I attempt to refer to soldiers neutrally as to sex. In any case, regardless of whether I refer to soldiers as he, she, or he/she, I am speaking of male and female soldiers.

. Commander/Manager. There are many terms such as commander, manager, supervisor, etc. that I consider interchangeable for my purposes in this thesis. Regardless of whether I use commanders, managers, or commanders/managers, I am referring to the commissioned or non-commissioned officers who are responsible for the supervision and/or management of subordinate enlisted soldiers.

ASSUMPTION

That all subjects are mentally "stable" and relatively consistent in their attitudes for the duration of their tour of duty. This means that the one-time sample will be a fair approximation of the soldiers' perceptions, performance and absenteeism.

THESIS STRUCTURE

Chapter I provides an overview of the evolution of psychological theories on motivation, managerial models and outlines the problem and hypotheses.

Chapter II provides a survey of current motivation theories and related studies.

Chapter III explains the derivation of human/job factors, structure of the questionnaire and procedures used in performing the survey.

Chapter IV describes the step-by-step analysis of sub-problems I through 10 and testing Hypotheses I through 10.

Chapter V discusses the results of the Chapter IV data analysis to include interpretation/opinion as to the meaning of significant correlations and recommendations for future study.

CHAPTER II

LITERATURE REVIEW

GENERAL

Because of the great number of theories and research studies in the area of motivation, I have restricted the scope of this literature review to theories and studies which have apparent relevance to behavior in formal organizations. I have intentionally skirted the vast pool of work by personality theorists, clinical psychologists, and psychoanalysts whose writings cannot be directly related to behavior in the work place.

My approach is to first survey those motivation theories that apply to the work situation, and second, to analyze the satisfaction-performance order-of-appearance controversy. For most research which has attempted to relate satisfaction to performance, the questions of whether satisfaction causes performance, performance causes satisfaction, or both are caused by a separate variable(s) has been the central issue. However, as explained in Chapter I (Introduction) and III (Research Method), the analysis of "primary" research in this thesis focuses on correlations between perceptions and performance, rather than on order-of-appearance between performance and any other variable(s).

THEORIES

The direction, energization, and persistence of work-related behavior is approached by many theoretical formulations under two broad categories. The first category of theories are concerned with the CONTENT of motivation and attempt to identify factors in the individual, his environment, or his behavior as he deals with his environment. They ask the question: WHAT is it that motivates people? The other major grouping of theories explain behavior from the aspect of expectancy and equity PROCESSES, by which the content factors influence behavior. They ask the question: HOW do environmental factors and individual needs determine behavior? Although this distinction is useful in classifying and discussing motivation theories, it should not be carried too far because the separation is more one of degree than of kind. That is, although content theories emphasize the WHAT of motivation, they also touch on process as well. And although process theories emphasize the HOW of motivation, they also cover content elements. In any case, I use this grouping (Content theories & process theories) in identifying theories and associated research. Now a look at motivation theories.

Need Hierarchy Theory (Maslow)

From its introduction by Abraham Maslow in the mid-1940s (Maslow, 1943, 1954) until the late 1970s, the need hierarchy Theory was primarily in the realm of clinical psychology. However, as more attention was focused on the role of motivation at work, the need hierarchy emerged as a popular model of human behavior.

Maslow viewed the human as a "wanting animal", motivated by desire to satisfy certain specific types of needs. Based on his observations, Maslow classified human needs in order of essence as:

PHYSIOLOGICAL needs, including the need for food, water, air, etc.

SAFETY needs or the need for security, stability, and the absence from pain, threat or illness.

BELONGINGNESS and LOVE needs.

ESTEEM needs, including both a need for personal feelings of achievement or self-esteem, and also a need for recognition or respect from others.

The need for self-actualization, a feeling of self-fulfillment or the realization of one's potential.

Maslow's contention is that the needs which are largely unsatisfied produce tension in an individual that lead them to behave in a way calculated to remove the tension and restore equilibrium. Once a need is satisfied, it does not continue as a motivating force until it again becomes manifest. For example, the hierarchy of needs may act on a person as follows. A person who has not eaten in several days becomes obsessed with the thought of food to the extent that hunger is the prime motivator. After the hunger is satisfied, a person can become aware of the need for personal safety and freedom from extreme pain. Only after the first two levels of need are satisfied can a person then turn his attention and efforts to the "higher" needs of belongingness,

esteem and self-actualization. In other words, the five need categories exist in a hierarchy of prepotency, such that the lower or more basic needs are inherently more important (prepotent) than the higher or less basic needs.

Maslow's theory has received much attention over the years, and has appeared to be "intuitively obvious". However, empirical verification attempts were not made for several years. The difficulty of not having sufficient longitudinal data is thought by some to preclude conclusive results. In the 1970 version of his theory, Maslow indicates that the entire hierarchy may tend to unfold, but does not unfold. Hall and Nougaim (1968) suggest that people progress up the hierarchy gradually through their entire life. They suggest that as people mature, different needs become important to them. When we have satisfied their lower level needs are satisfied, but in doing so, we have to face. As Hall and Nougaim (1968) suggest, people do not.

If these concepts are taken into account, it is not difficult to see how an individual might use a hierarchical mechanism to aid in explaining his or her behavior. If Maslow had observed people who were in the lower need areas, and he indicates that children observe their parents' behavior in his model, he might have seen the behavior of the children as he describes. And he might also see people who are in the lower need areas. However, he did not see the behavior of the children that lower level gratification of the children is to change.

Hall and Nougaim (1968) tested Maslow's theory in a study using 49 management students who were interviewed by telephone & Telegraph. Each year for five years the students were assessed by a three-hour interview by psychologists. The results of this interview were

coded and scored for need strength or importance, and for extent of satisfaction in terms of Maslow's need categories (safety, belongingness, esteem and self-actualization only). Hall and Douglas expected that to support Maslow, their findings would show, over time, a positive correlation between satisfaction at one level and need strengths at the next higher level. Also, changes in satisfaction at one level from year to year should be positively correlated with changes in strength at the next higher level. Thus, if a person was more successful after five years, he should have higher self-actualization need strength than he had five years ago.

Hall and Douglas found a positive correlation in the range of .05 to .25. However, this correlation is not strong enough to offer much support for Maslow's hierarchy. The correlation between need and satisfaction is low, and the correlation between lower-need higher-satisfaction and higher-need lower-satisfaction is low. This study is particularly important because it is the first to attempt to use the longitudinal approach to study Maslow's hierarchy. However, there are two aspects of this study which tend to dilute its significance: (1) the small sample size (N=100), and (2) the low correlation of agreement between the two measurements (.39 - .59).

More recently, Maslow (1954) has argued that much of the problem in finding support for his hierarchy is probably due to the fact that needs do not fit neatly into five distinct levels. He argues that needs are more continuously significant

differentiate between the two levels of analysis. In fact all studies to date have dealt with needs which are classified as to lower need, of food, safety, etc. and higher need, self-actualisation, getting a comparison among levels of need, but not comparing needs even working within the upper category of self-actualisation and self-actualisation which all probably have a high degree of satisfaction. The two-level analysis, as Maslow recommended for the future, would probably give much clearer distinctions and stronger support to the proposed hierarchy theory.

Abraham Maslow's Hierarchy of Needs

This hierarchy of needs was developed by Abraham Maslow and his associates at the University of California, Berkeley, in 1954. After an intensive study of the literature, the use of questionnaires, interviews, and clinical observations, Maslow proposed his classic hierarchy of needs. He argued that persons could be motivated by a hierarchy of various personality-related factors, including "deficiency needs" or social motives, and "growth needs" or self-actualisation. A central motivating force which determines the intensity, but also direction of goal-oriented behaviour, is the "hierarchy of needs" or "a construct . . . which contains a hierarchy of needs, a force which organizes perception, thought, and action in such a way as to move the person toward a satisfying, unsatisfying situation." (Maslow, 1954, p. 10). The hierarchy of social motives includes needs such as the need for

physicians, engineers, and other professionals, and excelling.

commanding, and persuading; and the needs of

helpless others.

• Subordination

• Self-assertion

high on a given scale. The theory also suggests that the needs of a person have been identified. For example, a person may have a high need for achievement, but this need has not been satisfied. The theory also suggests that a person's behavior is oriented toward the satisfaction of these needs. For example, a person with a high need for achievement may engage in challenging work that provides a sense of accomplishment. The theory also suggests that a person's behavior is oriented toward the satisfaction of these needs. For example, a person with a high need for achievement may engage in challenging work that provides a sense of accomplishment.

needs of a person. Murray identified a number of needs, particularly the need for achievement, which is the need for accomplishment and the need for self-assertion.

research is based on the assumption that a person's behavior is oriented toward the satisfaction of these needs.

need for achievement is a strong predisposition to strive for success. It is a strong desire for achievement as behavior toward competition, toward the attainment of excellence (McClelland, Atkinson, Clark and Havens, 1953). This motive is thought to be the positive influence on all performance.

Another prominent achievement motive theorist is J.W. Atkinson. The theory of achievement motivation (ATKINSON TO MOTIVATION (1964), uses a model of achievement motivation that have come from research in one area of psychology.

"All achievement motivation is a function of potential energy."

"Achievement motivation can be thought of as a function of potential energy from the achievement situation."

"Achievement motivation, as a function of achievement motives, they will vary on the basis of the situation."

"Achievement motivation is a function of achievement motives depends on the situation and the achievement situation."

"Achievement motivation is a function of achievement motives trigger different achievement motives, they will vary on the basis of situational factors."

"Achievement motivation is a function of achievement motives of satisfaction, they will vary on the basis of a motive as a function of a situation."

"Achievement motivation is a function of achievement motives results in the achievement situation."

In other words, the strength of a person's aroused motivation to bring about a particular change in the strength or readiness of his motives, and hence his behavior, depends on the situation: His expectations of performance, the value he attaches to the goals presented in the situation, and the incentive value of the goals. Aroused Motivation = $E \times V$, where E = expectancy of achievement, and V = incentive value of a particular goal.

The phenomenon of expectancy of achievement is determined through projective tests, such as the Thematic Apperception Test (TAT) as developed by Murray (1942). In this test, the subject is shown a series of pictures, each depicting a different social and work situation, and is asked to tell a story about each picture. The stories are then analyzed for the presence of the experimental variables, such as the degree of imagery associated with the goal.

Results of the study showed that the level of expectancy of achievement was highest at the achievement level, followed by the social level, and lowest at the work level. This is consistent with the theory that the achievement level is the most motivating level, followed by the social level, and the work level is the least motivating. I was particularly interested in the results of the study on the achievement level, as it showed that the level of expectancy of achievement was highest at this level, followed by the social level, and the work level. However, the study also showed that the level of expectancy of achievement was highest at the achievement level, followed by the social level, and the work level. (Gardner, 1977).

questionnaire and a special 1947 questionnaire. The businessmen were asked need for achievement of McClelland's modified version of the questionnaire for autonomy, need for aggression, and need for affiliation. The questionnaire was devised by Cummin.

The sample consisted of 100 successful executives. The list was obtained for each age group. The annual income was \$10,000 or more. The questionnaire was administered at this time each year. The score on the questionnaire was calculated. The significance of the difference between the two groups follows: The high group was significantly higher than the low group because the high group had a higher score on the questionnaire.

hypothesis had been that more successful executives will have high scores, it would have been supported with a moderate level of confidence ($p < .10$).

. Third Hypothesis. More successful executives will have high scores in need for power. This hypothesis was supported with a very high degree of confidence ($p < .01$).

. The final three hypotheses relating success in business to need for autonomy, aggression and deference were not supported.

As pointed out by Cummin, the findings concerning need for achievement are probably the most noteworthy. This finding not only supported McClelland's strong association between need for achievement and entrepreneurial success, but was shown to be related to success in a much more diversified sample of the business population. This result was a considerable expansion in that the term "entrepreneurial" applies to only a small portion of businessmen.

Another important result of this study is validation of the hypothesis concerning the relationship between need for power and success. This finding suggests that need for achievement alone is not the sole criterion for differentiating more or less successful executives. That is, successful executives have a need for increased responsibility and control within the organization. Therefore, according to Cummin, the typically successful business executive is the individual who is dedicated to a high standard of excellence in his work and seeks to assume greater responsibilities and more control over his environment as he advances.

The potential here is obvious. By identifying and learning to influence particular expectancies and incentives associated with a motive network, it is possible to strengthen the aroused motivation or behavior tendency. The implications for management are that managers who must fit the demands of a job to a pattern of behavior, may be able to selectively arouse latent needs to make the employee, or potential employee, more nearly fit the job.

Motivation-Hygiene Theory (Content)

Fredrick Herzberg began with the age-old question: How do you motivate employees? In his search for an answer to this question, Herzberg reviewed such positive "KITA" (kick in the ass) as reducing time spent on the job, increasing fringe benefits, human relations training, sensitivity training, efforts at two-way communications training, job participation, and employee counselling.

As a result of this effort and his motivation research with 200 engineers and accountants, Herzberg devised what has come to be one of the most popular and most replicated studies in the field of job attitudes. Herzberg's theory has been known as the motivation-hygiene theory, dual-factor theory and the two-factor theory. For the remainder of this thesis I will use the name motivation-hygiene theory.

Herzberg and his associates (Herzberg, Mausner, Peterson and Capwell, 1957) began their initial work on factors affecting work motivation in the mid-1950s. He proposed that job satisfaction is not the opposite of job dissatisfaction and vice-versa. That is, the opposite

of job satisfaction is not job dissatisfaction, but no job satisfaction; and the opposite of job dissatisfaction is not job satisfaction, but no dissatisfaction. This proposal included two categories of factors: One set of factors deals with the animal nature of man--the built-in drive to avoid pain from the environment (Dissatisfaction); and the other set of factors concern the human need to achieve and to experience psychological growth (satisfaction).

. Motivators or Satisfiers: Achievement
Recognition
Work Itself
Responsibility
Advancement
Growth

. Hygienes or Dissatisfiers: Company Policy & Administration
Supervision
Relationship With Supervisor
Work Conditions
Salary
Relationship With Peers
Personal Life
Relationship With Subordinates
Status
Security

In this initial study, Herzberg and his associates interviewed 203 accountants and engineers and asked them to describe specific instances when they felt exceptionally good or exceptionally bad about their jobs. Upon analyzing the content of these critical incidents, it was found that the good critical incidents were dominated by reference to intrinsic aspects of the job (motivators), while the bad critical incidents were dominated by reference to extrinsic factors (hygienes).

According to Steers and Porter (1975, p. 88), "One of the most significant contributions of Herzberg's work was the tremendous impact it had on stimulating thought, research and experimentation on the topic of motivation at work". The small amount of research done before 1959 was primarily concerned with laboratory-based findings or clinical observations, none directly addressing the problems of the workplace. Herzberg's work began to fill this void.

After this original study, a considerable number of empirical studies designed to test the validity of the motivation-hygiene theory were published and a heated controversy developed between supporters and critics of the theory. According to Nathan King (Steers and Porter, 1975, p. 116), the major portion of the controversy was caused by the lack of an explicit statement of the theory. The five versions of the theory are:

- I. All motivators combined contribute more to job satisfaction than to job dissatisfaction, and all hygienes combined contribute more to dissatisfaction than to satisfaction.
- II. All motivators combined contribute more to satisfaction than do all hygienes combined, and all hygienes combined contribute more to dissatisfaction than do all motivators combined.

- III. Each motivator contributes more to satisfaction than to dissatisfaction, and each hygiene contributes more to dissatisfaction than to satisfaction.
- IV. Theory III holds, and in addition, each principal motivator contributes more to satisfaction than does any hygiene, and each principal hygiene contributes more to dissatisfaction than does any motivator.
- V. Only motivators determine satisfaction, and only hygienes determine dissatisfaction.

Of the subsequent studies dealing with various aspects of the motivation-hygiene theory, Herzberg (1966) reviewed nine. He found all nine studies supporting theory I and five supporting theories II and III. He found no relevant empirical studies to support either theory IV or theory V.

In consideration of all relevant empirical studies to date, Nathan King (Steers and Porter, 1975, p. 131) concluded:

- 1. Theory I, although being supported by the Herzberg-type studies and the subject-coded studies, has not been adequately tested in studies where the determinants of satisfaction and dissatisfaction were measured by techniques other than direct self-report. It is thus possible that Theory I merely reflects defensive biases inherent in such self-report measures.
- 2. Theory II has not been adequately tested in studies other than the Herzberg-type critical incident studies. It is thus possible that Theory II merely reflects experimenter coding biases or defensive biases inherent in the self-report measures.
- 3. Theory III, being supported by the Herzberg-type studies but not by the subject-coded studies, merely reflects experimenter coding biases.

The following table summarizes six studies (1,220 subjects) reported by Herzberg (1966, p. 109):

FACTOR	SATISFIER	DISSATISFIER
Achievement	440	122
Recognition	309	110
Advancement	126	48
Responsibility	168	35
Work Itself	175	75
Policy and Administration	55	337
Supervision	22	182
Work Conditions	20	108
Relations With Superior	15	59
Relations With Peers	9	57

In the above table, the number under Satisfier is the number of subjects, of the 1,220 total, who remembered a satisfying critical incident relating to the factor in the left column. The same applies to the column under Dissatisfier.

Equity Theory (Process)

This second type of motivational theory is the cognitive process underlying feelings of equity or inequity that result from the comparison of what one gives to a social exchange situation (input) and what one gets from it (outcome), further compared to similar inputs and outcomes of others. Variations under the overall category of EQUITY Theory have included the "Cognitive Dissonance" Theory (Festinger, 1957; Heider,

1958), "Distributive Justice" or "Exchange" Theory (Homans, 1961; Jacques, 1961; Patchen, 1961) and "Equity" or "Inequity" Theory (Adams, 1963, Industrial Relations), and (Weick, 1964). Although there is some variation among sub-theories, the general thrust of them all is that a major determinant of job performance and satisfaction is the degree of equity, or inequity, that an individual perceives in a work situation.

The theory presents two basic postulates and various ways by which the person may achieve equity. First, the postulates: (1) that the presence of inequity in a person creates tension in him proportional to the magnitude of inequity present, and (2) that the tension created in the person will motivate him to eliminate or reduce it. The strength of this motivation is proportional to the tension created. For methods of reducing the inequity, a person may:

- . Increase his inputs if they are low in relation to either his own outcomes or in relation to Other's input-outcome ratio.

- . Decrease his inputs if they are high in relation to either his own outcomes or in relation to Other's input-outcome ratio.

- . Increase his outcomes if they are low in relation to his own inputs or in relation to Other's outcome-input ratio.

- . Decrease his outcomes if they are high in relation to his own inputs or in relation to Other's outcome-input ratio.

- . "Leave the field." This could take the form of quitting a job, obtaining a transfer or absenteeism.

. Act on Other. This may range from cognitively distorting the input-outcome ratio of others to obtain a better balance, to causing Other to leave the field.

. Change the referent Other.

Since the early 1960s there have been many studies of various aspects of this theory. In particular, a large number of studies have been about the dynamics of employees in the categories of "overpaid-hourly", "overpaid-piece work", "underpaid-hourly", and "underpaid-piece work". The format for these studies has generally been that the experimenter, posing as an employer, advertises for persons interested in part-time work. The experimenter creates the inequity induction by paying the subject more or less than the going rate, or by paying more or less than the going rate plus telling the subject that his/her qualifications for the job are lower than a comparison Other receiving the same pay. The subject performs the tasks and is rated as to quality and quantity of performance. The four categories of employees, with their projected mode of correcting inequality are:

. Overpaid-Hourly. The basic hypothesis is that overpaid subjects will raise their inputs by producing more as a means of reducing inequity.

. Overpaid-Piece Rate. The basic hypothesis is that overpaid subjects will produce higher quality and lower quantity than equitably paid subjects. The assumption is that overpaid subjects will increase their inputs to achieve equity. Theoretically these inputs lead to an increase in either quantity or quality of output, but increases in

quantity can only increase inequality because every unit is overpaid. Therefore inputs are increased as to quality, and outcomes per unit achieve a balance.

. Underpaid-Hourly. The basic hypothesis is that underpaid subjects decrease their inputs to achieve an input-outcome balance. Attempts to test this hypothesis have resulted in mixed findings.

. Underpaid-Piece Rate. The basic hypothesis is that underpaid subjects will produce a large number of low quality outputs because the production of low quality outputs permits increasing outcomes without substantially increasing inputs.

Generally, all four hypotheses were supported by a volume of studies. However, this is not to imply that the above conditional hypotheses are a fool-proof way of predicting behavior. There are still many confounding elements in the way of doing this, not the least of which are the great variations in employee perception as to what in fact is a subjective equity or inequity. A further question is, exactly how is the referent Other selected? For example, does the referent Other change for a person from situation to situation? Can the ideal self be the Other? And finally, what are the determinants of the choice of the referent Other? The questions regarding the referent Other are crucial because any speculation as to how an individual will view a future work situation will largely hinge on who he/she selects as the referent Other.

Expectancy-Valence Theory (Process)

Since expectancy theories differ somewhat in their definitions of major terms and outcomes, the approach here is to identify the major versions of the expectancy theory by proponent, with a brief summary as to research done.

Expectancy theory is also identified under several names, including Instrumentality Theory, Path-Goal Theory, Valence-Instrumentality-Expectancy (VIE) Theory, and Expectancy-Value Theory. I will use the term Expectancy-Valence because I believe it more descriptive of the two major variables. Specifically, according to the theory, the subject keys on an expectancy of an anticipated goal (VALENCE) rather than on a realized goal (VALUE).

Expectancy-Valence theories have their roots in the early work of E. C. Tolman and Kurt Lewin. Tolman (1932) discussed "expectations" and began pushing for a more cognitively oriented approach. Also, Lewin (1938) presented a cognitively oriented theory of behavior including such terms as "valence" and "force". Out of this basic work by Tolman and Lewin came a number of very similar theories. However they all seem to agree on some basic propositions such that valence and expectancy combine multiplicatively to determine behavior. That is, most theorists maintain that the strength of a tendency to act in a certain way depends on the strength of an expectancy that the act will be followed by a specific consequence (outcome) and on the value or attractiveness of that consequence to the subject.

Vroom (1964) proposed the most frequently cited expectancy theory of work motivation. Vroom begins with the basic assumption that, at any

given time, a person prefers some outcomes over others; that preference refers to a relationship between the strength of a person's desire for, or attraction toward, two outcomes. Vroom further emphasized the distinction between valence and value (p. 15), "An individual may desire an object but derive little satisfaction from its attainment--or he may strive to avoid an object which he later finds to be quite satisfying." Further, means acquire valence as a result of their expected relationship to ends. Vroom defines expectancy as the individual's belief that some particular outcome will probably follow some behavior. This belief can vary from certainty that the outcome will follow the behavior (subjective probability of 1.0) to certainty that it will not (subjective probability of 0.0). Vroom's third variable force is defined as a directional result of the combination of valence and expectancy. Vroom's variables are related such that: Probability of behavior = Expectancy x Valence (where valence is instrumentality x valence). As defined by Vroom (1964), the following propositions essentially constitute the body of his theory:

Proposition 1: The valence of an outcome to a person is a monotonically increasing function of the algebraic sum of the products of the valences of all other outcomes and his conceptions of its instrumentality in the attainment of these other outcomes. (p. 17)

Proposition 2: The force on a person to perform an act is a monotonically increasing function of the algebraic sum of the products of the valences of all outcomes and the strength of his expectancies that the act will lead to the attainment of these outcomes. (p. 18)

Green (1969) attempted to improve Vroom's model by further analyzing "outcomes" as they pertain to a work role such as "effective performer", "manager", and "group member". He posits that whether or not a person is performing in accordance with any particular role can be

determined by comparing his behavior to standards of role performance which may be either explicitly or implicitly stated. Graen also defines three classes of outcomes that result from the successful performance roles. One class involves intrinsic rewards such as feelings of achievement after having accomplished some self-valued task. A second class of role outcomes are externally mediated by some significant Other such as a supervisor who controls such things as pay or promotion. The third class of outcomes is automatic with the work role. These include such outcomes as status in the community associated with the role of "top executive".

Porter and Lawler (1968) propose that the amount of effort exerted toward job performance depends on how much a person prefers likely outcomes of effective performance (value of reward) and how much he believes the outcomes follow the exertion of effort (effort - reward probability). Or as summarized by Edward Lawler III (Lawler, Koplitz, Young and Padon, 1966, p. 268):

An individual's motivational force to perform where $E - P =$ expectancy that a given effort (E) will result in a desired performance (P). This can be influenced by such variables as self-esteem, past experience in similar situations, the actual situation and communications from others.

$P - O =$ expectancy that a given performance will lead to a desired outcome (O). This can be influenced by such variables as past experience in similar situations, attractiveness of outcomes, actual situation and E - P experience.

Valence = the strength of attraction from an outcome--as compared with value, which is actual satisfaction. Valence ranges from +1 (attraction) to -1 (avoidance).

Campbell, Dunnette, Lawler & Weick (1970) and Heneman & Schwab (1972) provide an extensive review of research on expectancy-valence

theory. These reviews generally conclude that Vroom's theory, and later modifications, are empirically supported. The two studies described below give a feel for the type results found.

A typical study using expectancy theory to generate predictions of how hard employees work on the job was conducted in 1963 using measurement techniques adapted from the attitude theory of Fishbein (Hackman and Porter, 1968). The setting for the study was three comparable-size offices of a telephone company. Subjects were 82 female service representatives working at these offices who had been on the job for more than three months. The statements were designed to determine employees' perception of the consequences of "working hard" on the job. Some of the statements were:

- . If a person works hard on the job, she is more likely to feel a sense of completion and accomplishment at the end of the day.
- . If a person works hard on the job, she is likely to receive more compliments and praise from her supervisor.
- . If a person works hard on the job, she is likely to receive a promotion more quickly.

In this study, work effectiveness was meant to be work quantity, hence work quality was monitored only from the aspect of error rate. The study resulted in the employees' expectancy correlating positively ($r = .40$, $p < .01$) with a composite criterion of work effectiveness and negatively with employee error rate, in support of the expectancy-valence theory.

A second variation of the Vroom basic expectancy model was proposed by Campbell, Bannette, Lawler and Weick (1970). In this "hybrid expectancy model" they address the need for more explicitly defined performance goals, and discuss task goals as to being established either externally by the person's work group or internally by the individual himself. Some examples of these task goals are production quotas, quality standards, and project time limits.

Campbell et al. also distinguish what they term first-level and second-level outcomes. First-level outcomes are directly contingent on effective performance resulting in accomplishment of task goals. These first-level outcomes can be either internal, e.g. the intrinsic rewards of growth and feelings of achievement, or external, such as the extrinsic rewards of job security, pay and promotion. Second-level outcomes, such as housing, food, community status and freedom from anxiety are attained as a result of realizing first-level outcomes.

It is obvious at this point that Vroom's original model has received considerable thought and some modification. However, these modifications have not changed the basic relationships he proposed: That the product of valence times expectancy is directly and causally related to level of performance.

Carrying on the concept of expectancy-valence, Georgopoulos, Mahoney and Jones (1967) tested what they termed "Instrumentality Theory" in an industrial setting. They obtained measures of the perceived instrumentality of high and low-need groups based on their ranking of three of these goals: "Making money in the long run"; "getting along well

with the work group", and "promotion to a higher base rate". The measure of productivity was based on subject reports of the percentage above or below the company-set standard they had reached. Finally, the workers were divided into high and low freedom groups on the basis of their freedom to set their own work pace. They found that: First, high productivity was associated with the perception that high productivity leads to each of the three goals in question; second, for those workers who ranked the goals as important to them, the relationship between perceived instrumentality and productivity was significantly higher for those classified as free; and finally, those workers who were both free and had a high need on an item showed a stronger relationship between perceived instrumentality and productivity than did workers with any other combination of these two factors. The George and Janis study supports the hypothesis that productivity is related to perceived instrumentality toward the attainment of goals, and that degree of attraction to the goals and freedom of action mediate this relationship.

Satisfaction - Performance Relationship

After having reviewed the major theories and research in motivation, we now have a perspective as to state-of-the-art in influencing motivation and the necessary vocabulary for approaching the crucial question of: What is the actual relationship between job attitude and job behavior?

Managers and organizational researchers have been interested in this relationship since at least the human relations movement of the 1930s. However, in those days the relationship was not a question, because it was

generally assumed that job satisfaction "caused" improved job performance. The managerial marching order seemed simple: Keep your employees satisfied! This rather complaisant approach was interrupted primarily by two works: Brayfield and Crockett (1955, p. 396) concluded that "... little evidence existed of any simple or even appreciable relation between job satisfaction and resulting performance"; and Vroom (1964) analyzed twenty studies that measured satisfaction and performance and found that the two variables had a median correlation of only .14. These works actually sparked the satisfaction-performance controversy which eventually led to the three competing hypotheses: (1) satisfaction leads to performance; (2) satisfaction and performance are essentially unrelated and are each caused by a third (or more) set of independent variables; and (3) performance leads to satisfaction.

First, the hypothesis that satisfaction leads to performance. This hypothesis and of course received its primary support from the human relations school of management and motivation.

Hersberg's motivation-hygiene theory is probably the best example of a current formulation of the satisfaction-leads-to-performance idea. As mentioned earlier, this has been one of the most replicated theories ever. However, the majority of the replications analyzed job satisfaction and dissatisfaction as ends in themselves, and/or their relationship to each other, but not how either relates to performance. Therefore, as viewed by most researchers, the empirical validity of the satisfaction-performance relationship specified in Hersberg's theory rests entirely on the original study of 203 accountants and engineers.

Expectancy/valence theories such as Vroom's should also be prime candidates for getting at the satisfaction-performance question, since it should follow from his theory that the force exerted on an employee to remain on the job is an increasing function of the valence of the job. However Vroom's review of twenty-three field studies investigating the relationship between satisfaction and performance revealed a median correlation of .14. This means that satisfaction explained less than 2 percent of the variance in performance.

Some of the reasons for the widespread acceptance of the satisfaction-causes-performance proposition are intuitively obvious. Acceptance of the idea is the path of least resistance for the manager, for it is far more pleasant to increase an employee's happiness than to deal directly with his performance when a performance problem exists. High job satisfaction and high performance are both good. Therefore, it is assumed that they are related since "all good things go together".

As doubt began to appear about the widely accepted interpretation, William G. Scott (1962, p. 93) stated the problem as such: ". . . high morale is no longer considered as a prerequisite of high productivity. But more than this, the nature of the relationship between morale and productivity is open to serious questioning. Is it direct? Is it inverse? Is it circular? Or is there any relationship at all between the two; are they independent variables?"

The crowning blow to the universal acceptance of this proposition seems to have been provided by the previously mentioned analysis of Brayfield and Crockett (1955). Their fifty-study review left little doubt as to the uncertainty of the satisfaction-performance connection.

Next, we have the proposition that performance and satisfaction are caused by other variables. This is not truly a separate category in that the primary model by March and Simon actually hypothesized that: (Steers and Porter, 1975, p. 229) "Motivation to produce stems from a present or anticipated state of discontent and a perception of a direct connection between individual production and a new state of satisfaction." This hypothesis is that performance is a function of two variables: (1) degree of satisfaction experienced, and (2) perceived instrumentality of performance for the attainment of valued rewards. While this model indicates that both dissatisfaction and instrumentality may affect amplitude and direction of performance, it provides the possibility that a dissatisfied employee may not see performance as leading to satisfaction, or he/she may even see nonperformance as leading to greater satisfaction.

March and Simon do not discount all connection between satisfaction and performance. However, they propose that the linkage will be weaker than with the other two propositions (satisfaction \rightarrow performance, or performance \rightarrow satisfaction) due to one or a combination of the following: (1) job satisfaction may result from rewards not based on performance; (2) even if the employee chooses the desired performance, the resulting reward will not necessarily match the anticipated reward; and (3) during the delay from behavior to reward, the worker's level of aspiration may be raised enough to more than compensate for the reward value, leaving the worker at least as dissatisfied as before the performance. With March and Simon, the question of if and how the subject will perform is primarily a matter of interaction between the levels of expected value of rewards and aspiration levels.

Finally, we have the proposition that performance causes satisfaction. The most prominent model here is provided by Porter and Lawler (1968). They provide a model that posits circularity between performance and satisfaction; however, the most direct linkage gives performance as the causal variable and satisfaction as the dependent variable. The model is structured as follows:

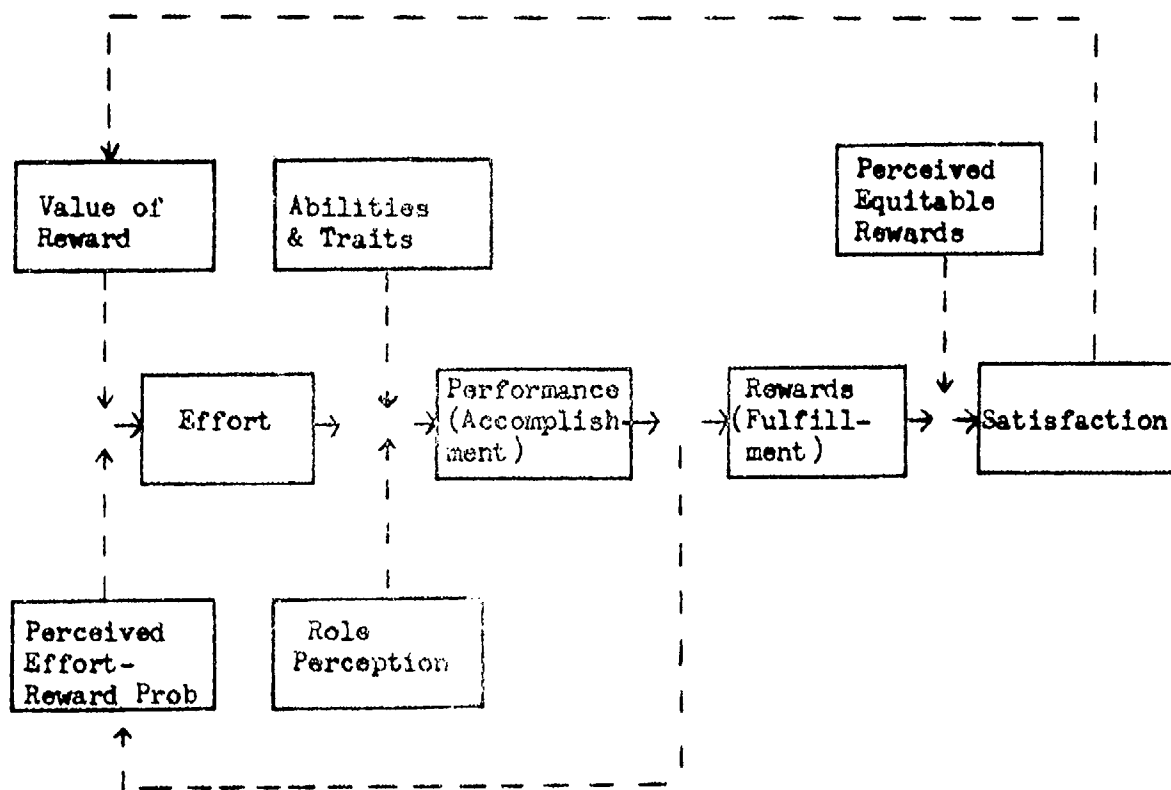


Figure 1. Performance - Satisfaction. (Steers and Porter, Motivation and Work Behavior, New York: McGraw-Hill, Inc., 1975, p. 232)

Note that for satisfaction to influence performance, it must affect the value of the rewards received, which in turn interacts with the perceived effort-reward linkage to determine level of work effort. Therefore, effort moderated by role perceptions, abilities and traits determine performance. Porter and Lawler conclude that due to the number of intervening variables, it seems unlikely that satisfaction (or dissatisfaction) has as much impact on performance as performance has on satisfaction.

In conclusion, regardless of personal preference as to motivation theories and ideas, one point seems clear: Satisfaction and performance studied alone or together, are associated with many covariates. This indicates that research has not accounted for a sufficient number of the variables that may affect the strength and direction of motivation, or that they have not been adequately associated with performance. In considering the impact of the foregoing on the manager-employee relationship, I agree with Charles W. Green (in Steers and Porter, 1975, p. 253): "It is apparent that the manager whose objective is to significantly improve his subordinates' performance, has a difficult but by no means impossible task. The path of least resistance--that is, increasing subordinates' satisfaction--simply will not work". However, this does not mean that rewards are not a necessary factor in motivation. Appropriate performance-reward contingencies will result in improved performance, if such improvement is not restricted by ability, direction problems, or by performance obstacles. Use of differential rewards may require courage by the manager, but failure to use these rewards will have far more negative consequences.

Motivation Theory in Perspective

Motivation is defined as that which energizes, directs, and sustains behavior. These variables can be found at three levels in the organizational setting. First, some are unique to the individual (attitudes, interests, specific needs, etc.). Second, other variables stem from the nature of the job (degree of control over the job, level of responsibility, etc.). Third, still other variables such as peer group relations, supervisory practices, systemwide rewards and organizational climate were found in the larger work situation or organizational environment. Further, it was emphasized that instead of viewing these variables as three static lists of items, considerations must be given to how they affect one another and change over time in response to circumstances. In other words, a systems approach is necessary to fully understand the dynamics of the motivational situation. The individual was seen as being in a constant state of flux in relation to motivational direction and level, based on the nature, strength and interactive effects of these three groups of variables.

An analysis of data presented reveals that several INDIVIDUAL characteristics can represent a significant influence on employee performance. For example, there is good evidence that individuals who have a high need for achievement generally perform better than those with a low need (Cummin, 1967). Other evidence (Steers & Porter, 1975) indicates that persons who have strong negative attitudes toward an organization are less likely to get involved in organizational activities. Locke and his associates (Locke, Cartledge and Knerr, 1970) provide laboratory evidence that personal

aspiration level on a task can be an accurate indicator of actual performance. Finally, Adams (1965) and others found that perceived inequity in a job situation was clearly associated with changes (up or down) in performance levels. While the list of examples could go on, these are representative of the findings that generally support the charges that personal characteristics unique to an individual can have a significant impact on his/her work behavior.

A similar pattern emerges when considering JOB-RELATED characteristics. Lawler (1969), Hulin (1971), Steers and Porter (1974), and others have presented evidence showing that variation in the nature of the task itself can influence performance and satisfaction. However, these considerations must be tempered with considerations of individual characteristics. For example, several studies found that "enriching" employees' jobs by giving them more variety, autonomy and responsibility tended to result in improved performance. However, much stronger evidence emerged when individual characteristics were considered. It appears that not everyone wants, or reacts to the same degree, an "enriched" job, nor does everyone perform better when assigned to one. Consideration must be given to the characteristics of the individual such as whether, and to what degree, the worker has need for achievement, power, and so forth, when considering the job structure.

Finally, one must consider the effect of WORK ENVIRONMENT on motivation and performance. Campbell et al. (1970) studied the available research as to the environmental impact and discussed the importance of such variables as group influence, leadership styles, and systemwide reward

structure as they relate to employee performance. But again we get back to the integrative nature of the problem. For example, it is possible that high group cohesion (a work environment characteristic) may be a more potent influence on behavior for a person with a high need for affiliation (an individual characteristic) than for a person with a low need for affiliation. Also, persons with a high need for achievement may care less about group cohesion than about economic rewards. In any case, for the work environment, as well as for the other two categories of variables, the most important point is that we study relationships among variables, rather than focus on one type of variable.

Of course, the usefulness of a theory or model is determined by the degree to which it can account for a wide diversity of variables, while at the same time integrating them into a cohesive, unifying framework. Such a theory should account for variables from the above areas of individual, job and work environment. At this point, without attempting to judge the five major theories as to their coverage of all important variables, I will briefly review each in light of the three categories of variables.

The theories of Maslow (Need Hierarchy) and of McClelland and Atkinson (Achievement-Motivation) are primarily individual theories of motivation. While they do not entirely ignore the job environment, the primary emphasis is on individual characteristics. It is easy to see how job factors could play a major role in both models. For example, for employees with a strong need for Maslow's self-actualization, a work environment that meets this need could go far in increasing the employee's propensity to stay and participate. A similar proposal could be for

creating an achievement-oriented work environment for employees high on the McClelland-Atkinson need for achievement.

In contrast to the two major "need" theories which focused primarily on personal issues, Herzberg concentrated on the nature of tasks which the individual must perform. Herzberg considered that, although work environment is relevant, a much more important consideration is whether the employee perceives the job as providing recognition, advancement and achievement. Therefore Herzberg's emphasis was on job enrichment as the best way to increase satisfaction. Another aspect of Herzberg's contribution becomes clear in historical perspective. Before his initial efforts in the late 1950s, most managers and researchers were considering only two categories of variables as potential sources of motivation and satisfaction: INDIVIDUAL variables by such theorists as Maslow and McClelland & Atkinson; or the WORK ENVIRONMENT variables of supervisory relations, pay systems, etc. Herzberg, in effect, plugged in that very essential category--the intrinsic aspects of the JOB itself.

Adam's theory of inequity keys on the relationship between individual characteristics (attitude toward inputs and outputs, tolerance for feelings of inequity, etc.) and the work environment, particularly systemwide reward practices. However, Adams does not deal with any category exclusively or in isolation. He emphasizes the interactive effects among all relevant variables.

Finally, the expectancy-valence theory makes an attempt at covering all three categories of variables (individual, work environment

and the job) by dealing with the concept of perceived equitable reward and the necessity of recognizing variations in individual need strengths. It also acknowledges that people have different beliefs and expectations. Expectancy-valence theory covers job-related variables by pointing out, for example, that job attributes may at times serve as sources of intrinsically valued rewards. This theory also focuses very explicitly on several work environment influences on performance, particularly those influences relating to reward structures. But again, this theory, as do most others, emphasizes the need for analyzing relationships among variables for a full understanding of their impact on motivation and performance.

In summary, each of the theories has made its own significant contribution to the study of work motivation. It is apparent how much progress has been made since the time of Fredrick Taylor and scientific management. Managers no longer see money as the only motivator. Motivation study has also progressed since the human relations movement in that we no longer consider a satisfied worker a productive worker. In short, we live today in a complex society where employees have come to expect more from their jobs in the way of both intrinsic and extrinsic rewards. Further research is needed to develop new directions for satisfying both managerial demands for greater productivity and employee needs for increasingly meaningful work.

ABSENTEEISM

While the thrust of this study is examining the satisfaction-performance question, I am also looking at absenteeism as it relates to satisfaction. As explained in Chapters I & II, each subject's supervisor indicates the number of half-days AWOL during the previous month. I will use this figure to determine correlations between AWOL, satisfaction and performance.

Most research in this area has grouped absenteeism with turnover. Since 1950 there have been four major reviews of the literature dealing with turnover and absenteeism: Brayfield & Crockett, 1955; Herzberg, Mausner, Peterson & Capwell, 1957; Vroom, 1964; and Schuh, 1967. These studies showed a consistent negative relationship between job satisfaction and the propensity to leave (turnover). However they found a slightly less consistent negative relationship between job satisfaction and absenteeism.

An example of the type study reviewed is given by Hulin (1966). Two related studies investigating the impact of job satisfaction on turnover among female clerical workers, began by using the Job Descriptive Index as a measure of job attitudes. The studies matched each subject who subsequently left the company during the following year with two employees who stayed on the job. Significant differences were found between the "stayer" and the "leaver" groups as to mean satisfaction scores. Further, leavers could usually be predicted, based on their score on the attitude scale, as much as one year in advance.

The fact that most studies have grouped turnover and absenteeism, and that these variables have been negatively correlated with satisfaction on the job, led to my hypothesis concerning the relationship between job satisfaction and AWOL among U.S. Army soldiers. As stated in Chapter I, I did not approach the relationship between job satisfaction and turnover.

CHAPTER III

RESEARCH METHOD

As indicated in Chapters I and II above, theorists have approached motivation from almost every conceivable angle. I reviewed this work with the question: What variables are associated with behavior on the job--performance? The Need Hierarchy, Achievement Motivation and Equity Theories were helpful in gaining a perspective on the full range of human behavior, and behavior in the work place. However, these theories do not lend themselves to the narrow focus of this study. Therefore, as to what I consider to be a logical extension of past work, I chose the Expectancy-Valence and Motivation-Hygiene Theories for several reasons: First, the Expectancy-Valence Theory is a very direct approach to behavior, using the three variables: E - P, P - O and Valence as defined in Chapter II; and second, I believe that Herzberg's list of human/job factors are very good discriminators of job satisfaction and dissatisfaction. However, replications of Herzberg's theory focused on satisfaction rather than on performance as the ultimate goal.

Therefore, I have extracted the primary variables from both of these theories to construct a questionnaire as a research/survey device. The statements/questions, to be rated on a scale of 1 through 9 as to the subject's extent of agreement with each, are as follows:

- .1. My job performance gives me a sense of achievement.
- .2. This job allows me to gain the recognition I deserve for superior performance.

- .3. I enjoy doing my job.
- .4. My job allows me to assume as much responsibility as I want.
- .5. I feel that this job helps my advancement opportunities.
- .6. I feel that this job provides me an opportunity to develop my capabilities.
- .7. I feel that company policy and administration is fair.
- .8. I feel that company supervision is proficient and fair.
- .9. I enjoy a good relationship with my supervisors.
- .10. I consider my salary to be fair and adequate.
- .11. I consider my working conditions to be adequate.
- .12. I enjoy a good relationship with my fellow workers.
- .13. I feel that my personal life (home, family, etc.) help me do a good job.
- .14. I am satisfied with the status my job provides me.
- .15. My job provides a feeling of security.
- .16. I feel that I am capable of doing my job well.
- .17. If I do a good job I will be appropriately rewarded.
- .18. I feel that the Army's present policy of rewarding good performance is fair and adequate.

Note: The above questions are sub-scaled as follows: Motivators (1 - 6), Hygienes (7, 8, 10, 11, 14 & 15), Relations (9, 12 & 13), and Expectancy-Valence (16, 17 & 18).

Accompanying the above questionnaire for each subject is a form to be completed by the subject's immediate supervisor. This form has the supervisor's rating of the subject's past performance on a scale of 1 through

9, and indicates the number of half-days during the past month in which the subject has been absent from his/her job without a legitimate excuse (AWOL).

I am limiting the structure of the surveyed population to U.S. Army soldiers (male and female) in the grades E-1 through E-4 because I am focusing on workers rather than on managers. As to job category, there is an approximate balance among the three U.S. Army disciplines: Combat Arms = 49, Combat Support = 51, and Combat Service Support = 56. Composition ranges from artillery and engineer soldiers in combat arms, to signal and military police soldiers in combat support, to medical, administrative and supply soldiers in combat service support. As to specific subject selection, subjects were randomly selected from within units stationed at Ft. Hood, Texas, Ft. Carson, Colorado, and Ft. Leavenworth, Kansas.

Data from this survey is analyzed in Chapters IV and V to address the problem and ten sub-problems (Chapter I).

CHAPTER IV

DATA ANALYSIS

GENERAL

Chapter I describes the problem, with ten sub-problems, and ten corresponding hypotheses. To provide continuity from each sub-problem, thru each hypothesis, to analysis of data related to each question, this chapter is grouped into five categories of analysis which include the ten questions in sub-problem/hypothesis order.

RELATIONSHIP OF RESPONSE LEVEL TO PERFORMANCE

Question 1: How do subject's overall level of response correlate with their rated level of performance? This problem was addressed by entering each subject's composite response score (total of all 18 responses) and his/her performance rating into the computation of the Pearson correlation (r) formula (two variables per subject). As predicted in Hypothesis 1, the resulting correlation was: $r = .35$, $p < .001$.

Question 2: How do subject's level of response, on each question, correlate with their rated level of performance? This was also addressed using the Pearson r whereby each subject's response on each question was entered with his/her performance rating. Again, as predicted in Hypothesis 2, there was a positive correlation between level of response and performance on all questions except question 12. Results are as shown in Table 1 below.

TABLE 1
Correlation Between Response Level on Each
Question and Performance

Question	Correlation With Performance
1	.22**
2	.26**
3	.19**
4	.26**
5	.21**
6	.16*
7	.22**
8	.19**
9	.21**
10	.29**
11	.26**
12	.03
13	.17*
14	.26**
15	.29**
16	.26**
17	.21**
18	.19**

*p < .05

**p < .01

Question 3: How do subjects' level of response on each question, by discipline, correlate with their rated level of performance? This is a more detailed look at how each discipline's level of response are correlated (Pearson r) with their performance rating. As shown in Table 2 below, these results are more mixed than were the composite comparisons in Table 1. The most consistent support of Hypothesis 3 is in the discipline Combat Arms.

TABLE 2
Correlation Between Response Level on Each
Question and Performance--By Discipline

Question	Correlation With Performance		
	CA	CS	CSS
1	.38**	.02	.16
2	.37**	.23*	.08
3	.38**	-.08	.07
4	.46**	.22	.09
5	.35**	-.03	.18
6	.36**	-.16	.17
7	.27*	-.04	.30*
8	.39*	-.07	.22
9	.34**	-.06	.19
10	.30*	.26*	.21

* $p < .05$

** $p < .01$

CA = Combat Arms

CS = Combat Support

CSS = Combat Service Support

TABLE 2 (Continued)
 Correlation Between Response Level on Each
 Question and Performance--By Discipline

Question	Correlation With Performance		
	CA	CS	CSS
11	.27*	.07	.40**
12	-.06	-.08	.30*
13	.17	.05	.17
14	.43**	.03	.17
15	.46**	.01	.24*
16	.41**	.03	.34**
17	.26*	.07	.29*
18	.15	.09	.33**

*p < .05

**p < .01

CA = Combat Arms

CS = Combat Support

CSS = Combat Service Support

Question 4: How do disciplines' level of response within each sub-scale correlate with performance? This is a further breakdown of results by comparing disciplines as to how response levels within each sub-scale correlate with their rated performance. This computation uses, for each subject, the sum of responses within each sub-scale, as compared with performance level. The consistency of support for Hypothesis 4 by Combat Arms is not shared by the other disciplines. Results are as shown in Table 3 below.

TABLE 3
Correlation Between Response Level and Performance
By Sub-Scale

Performance By	Correlation With Response In			
	M	H	R	E
CA	.48**	.47**	.24*	.33**
CS	.34	.07	-.03	.08
CSS	.16	.37**	.28*	.41**

*p < .05

**p < .01

M = Motivator Items

H = Hygiene Items

R = Relation Items

E = Expectancy/Valence Items

COMPARISON OF DISCIPLINES AS TO RESPONSE LEVEL

Question 5: How do disciplines compare as to overall level of response on all questions? This computation is via Chi-Square as follows: First, the grand median was determined for response level by all subjects on all questions; next, the subjects were divided within disciplines as to number above and below the grand median; and finally, a 2(high vs. low response level) x 3(disciplines) Chi-Square table was computed as shown in Table 4 Below. This analysis supported Hypothesis 5.

TABLE 4

Observed and Expected Frequencies of Response
by Level of Response and Discipline

Response Level		Discipline		
		CA	GS	SSS
High	Observed	25	25	30
	Expected	24	25	27
Low	Observed	23	25	24
	Expected	24	25	27
Total		48	50	54

$\chi^2 = .75$, $df = 2$, Not Significant

Question 6: How do disciplines compare as to level of response within each sub-scale? This Chi-Square computation is a further comparison to determine if response within sub-scale is significantly different from the overall response as shown in Table 4. Hypothesis 6 was supported in all sub-scales except hygienes. Results are as shown in Tables 5a through 5d below.

TABLE 5a

Observed and Expected Frequencies of Response by Level of Response and Discipline--Within Sub-Scale Motivators

Response Level		Discipline		
		CA	CS	CSS
High	Observed	22	23	35
	Expected	23	25	28
Low	Observed	24	27	21
	Expected	23	25	28
Total		46	50	56

$\chi^2 = 3.91$, $df = 2$, Not Significant

TABLE 5b

Observed and Expected Frequencies of Response by Level of Response and Discipline--Within Sub-Scale Hygienes

Response Level		Discipline		
		CA	CS	CSS
High	Observed	20	25	35
	Expected	24	24	27
Low	Observed	28	23	19
	Expected	24	24	27
Total		48	48	54

$$\chi^2 = 6.16, df = 2, p < .05$$

TABLE 5c

Observed and Expected Frequencies of Response by Level of Response and Discipline--Within Sub-Scale Relations

Response Level		Discipline		
		CA	CS	CSS
High	Observed	18	22	29
	Expected	22	24	23
Low	Observed	26	26	17
	Expected	22	24	23
Total		44	48	46

$$\chi^2 = 4.92, df = 2, \text{Not Significant}$$

TABLE 5d

Observed and Expected Frequencies of Response by Level of Response and
Discipline--Within Sub-Scale Expectancy/Valence

Response Level		Discipline		
		CA	CS	CSS
High	Observed	24	21	29
	Expected	23	22	25
Low	Observed	22	23	21
	Expected	23	22	25
Total		46	44	50

$\chi^2 = 1.46$, $df = 2$, Not Significant

RELATIONSHIP BETWEEN AWOL LEVEL AND RESPONSE LEVEL

Question 7: How does AWOL level relate to overall level of response (all subjects)? This Chi-Square analysis was computed as follows: First, using the previously computed grand median based on overall response level, subjects were divided as to high (above the median) and low (below the median) response level; next, subjects were divided as to high (at least one instance of $\frac{1}{2}$ day AWOL) and low (no unauthorized absences) AWOL rate; finally a 2 x 2 Chi-Square (Table 6) was computed. The support here for Hypothesis 7 was not statistically significant. It is to be noted that subject totals in this and other χ^2 tables vary from the grand total of 155 subjects because those subjects with a response level equal to the grand median were not considered in χ^2 computations.

TABLE 6

Observed and Expected Frequencies of AWOL by Response Level

Response Level		AWOL	
		High	Low
High	Observed	8	71
	Expected	10	66
Low	Observed	12	61
	Expected	10	66
Total		20	132

$\chi^2 = 1.56$, $df = 2$, Not Significant

Question 8: How does AWOL level relate to level of response by sub-scale?

As was done in the above categories, this question is an expansion of AWOL level--response level comparison started in question 7. Of the four x^2 tables 7a through 7d, all but the Expectancy/Valence computation are statistically significant. Therefore Hypothesis 8 is rather strongly supported by the x^2 computation in Tables 7a through 7d below.

TABLE 7a

Observed and Expected Frequencies of AWOL by Response Level

Sub-Scale Motivators

Response Level		AWOL	
		High	Low
High	Observed	3	75
	Expected	9	67
Low	Observed	15	59
	Expected	9	67
Total		18	134

$$x^2 = 9.91, df = 1, p < .01$$

TABLE 7b

Observed and Expected Frequencies of AWOL by Response Level
Sub-Scale Hygienes

Response Level		High	AWOL Low
High	Observed	5	76
	Expected	10	67
Low	Observed	15	58
	Expected	10	67
Total		20	134

$$\chi^2 = 7.42, df = 1, p < .01$$

TABLE 7c

Observed and Expected Frequencies of AWOL by Response Level
Sub-Scale Relations

Response Level		High	AWOL Low
High	Observed	3	67
	Expected	9	39
Low	Observed	15	11
	Expected	9	39
Total		18	78

$$\chi^2 = 48.21, df = 1, p < .01$$

TABLE 7d
Observed and Expected Frequencies of AWOL by Response Level
Sub-Scale Expectancy/Valence

Response Level		AWOL	
		High	Low
High	Observed	7	67
	Expected	9	62
Low	Observed	11	57
	Expected	9	62
Total		18	124

$\chi^2 = 1.70$, $df = 1$, Not Significant

RELATIONSHIP OF PERFORMANCE LEVEL TO AWOL RATE

Question 9: How does level of performance relate to level of AWOL?

This analysis uses each subject's composite response score (all 18 questions) as compared with high-low AWOL level. The determination of high-low AWOL and performance has been explained in previous questions. Hypothesis 9 was strongly supported---as indicated in Table 8 below.

TABLE 8

Observed and Expected Frequencies of AWOL by Performance Level

Performance Level		AWOL	
		High	Low
High	Observed	5	64
	Expected	6	48
Low	Observed	7	32
	Expected	6	48
Total		12	96

$$\chi^2 = 11.0, df = 1, p < .01$$

RELATIONSHIP AMONG THE 18 QUESTIONS AS TO LEVEL OF RESPONSE

Question 10: What are the correlations among the 18 questions as to level of response? This analysis was done by computing an 18 x 18 correlation matrix using the Pearson r. With a few exceptions, the results strongly supported Hypothesis 10. Results are as shown in Table 9 below.

TABLE 9

Correlation Among All 18 Questions As To Response Level

Q	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2	.60																
3	.60	.41															
4	.50	.57	.44														
5	.47	.51	.60	.54													
6	.54	.54	.59	.57	.75												
7	.38	.38	.29	.36	.46	.31											
8	.33	.22	.24	.31	.35	.38	.65										
9	.35	.29	.27	.42	.38	.34	.40	.39									
10	.15	.30	.23	.21	.27	.18	.30	.15	.16								
11	.39	.38	.39	.46	.50	.45	.45	.41	.39	.31							
12	.28	.16	.35	.17	.21	.15	.14	.08	.38	.06	.19						
13	.34	.26	.14	.20	.24	.16	.31	.14	.35	.32	.29	.19					
14	.49	.55	.47	.45	.57	.52	.31	.27	.30	.33	.50	.20	.20				
15	.54	.56	.49	.49	.58	.51	.44	.37	.40	.42	.44	.23	.33	.66			
16	.33	.35	.35	.24	.18	.21	.16	.15	.30	.17	.10	.37	.31	.19	.23		
17	.35	.48	.24	.37	.37	.33	.36	.43	.27	.27	.46	.12	.14	.47	.49	.13	
18	.34	.49	.24	.24	.30	.29	.51	.26	.40	.40	.32	.16	.24	.45	.49	.21	.66
Q	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

r over .19 = $p < .01$; r of .13 - .19 = $p < .05$; r less than .13 = Not Significant

CHAPTER V

CONCLUSIONS/APPLICATION/RECOMMENDATION

CONCLUSIONS

Response Level and Performance

As outlined in Chapter I (Situation Leading to the Problem), the military manager has unduly emphasized soldier satisfaction as the prime indicator of soldier effectiveness. The apparent assumption that if a soldier or unit possesses a high level of satisfaction, a high level of job performance is assured, has led to considerable effort and expense at job enrichment and job benefits; all this without analysis as to how these efforts and expenditures relate to performance. As stated in Chapter I, I do not believe this to be either true or supported by research.

As an overall evaluation of the relationship between response level and rated performance, I found a significant positive correlation between these two variables. However a more detailed breakdown by discipline and sub-scale revealed two of the three disciplines with significant correlations in sub-scale Hygienes, Relations and Expectancy/Valence, but only one discipline significant in sub-scale Motivators. This relatively weak finding in Herzberg's sub-scale Motivators (satisfaction items) reinforces my contention that the military's satisfaction-performance assumption is not founded in fact.

Carrying this analysis further, I believe the fact that two of the three disciplines had significant response level-performance correlations

in all sub-scales except Motivators (only CA was significant in Motivators) support what many leaders have suspected about the U.S. Army--that what leaders generally consider job satisfaction/motivation, is actually lack of dissatisfaction. Accepting the assumption, which I think legitimate, that reenlistment rate is related to job satisfaction, the U.S. Army's Sergeants Major Academy at Fort Bliss, Texas has discovered some interesting findings in its three-year program of seminar discussions between junior enlisted men/women and Academy students. In a 17 January 1978 letter to Major General John W. Seigle, U.S. Army TRADOC, Colonel James E. Crow, Academy Commandant outlined some of these findings:

They (junior enlisted soldiers) were generally satisfied with their jobs, but normally were reenlisting for other reasons than job satisfaction. These reasons included economic advantages of the service, educational benefits, medical benefits, job security, special training opportunities, and reassignment to an area of choice. . . . Among soldiers who did not intend to reenlist, which was the majority, the most frequently cited reason was lack of job satisfaction.

It is noted that virtually all of the reasons given for reenlisting are sub-scale Hygiene items. I think this widespread perception by junior enlisted soldiers tells us as military leaders that our lack of emphasis on true "motivators" is being reflected in soldiers' lack of job satisfaction, hence lack of a desire to continue in the job. My reasoning is that the lower correlation in sub-scale Motivators is due to the situation where the subject perceives a void; there is nothing tangible with which performance can correlate. For example, there may be some sporadic high or medium performance due to merely "expectations" that the "satisfaction" situation will improve.

Comparison of Disciplines as to Response Level

The overall comparison among disciplines as to level of response was not significant. However comparisons by sub-scale resulted in CSS scoring significantly higher than CA and CS in sub-scale Hygienes. Consider this difference in view of the response level vs. performance category where CA was the only discipline with a significant correlation between response level on Motivator items and performance. The fact that CSS is far ahead of CA in sub-scale Hygienes (as well as in all others, but not significantly so), yet did not have corresponding response levels in sub-scale Motivators, supports Herzberg's Motivation Hygiene Theory that Hygienes will remove dissatisfaction, but Motivators are required to cause Satisfaction--hence Performance.

Response Level and AWOL

Again in this category, I found nothing statistically significant in the overall comparison. However when I compared these two variables at sub-scale level, I found a significant inverse relationship between AWOL and Response Level in all sub-scales but Expectancy/Valence. As to this result in Expectancy/Valence, I suspect that the more abstract/long range aspect of these Expectancy/Valence items caused them to be less seriously considered by the soldiers. As to the three sub-scales with significant inverse relationships, these findings support Hypothesis 7 and are what commanders/managers would intuitively expect.

Performance and AWOL

I found a significant inverse relationship between AWOL and Performance. This is a rather straightforward and expected finding in that a soldier is obviously not performing while AWOL, and further, the supervisor of the AWOL soldier probably could not objectively rate the performance of this soldier when he is at work (after he has once gone AWOL).

18 Item Questionnaire Intercorrelations

I found consistently high intercorrelations with this survey device. I suspect that part of this intercorrelation is due to the "Halo" effect and the soldier having only one opportunity to express his perceptions. A longitudinal study of the type I recommend below should indicate whether the intercorrelations are in fact authentic.

APPLICATION

I would not be so vain as to expect that I could (or would even try to) give a commander/manager a magic do and don't list which would lead to better performance in his/her unit or organization. I further realize that "objective" reality is a myth; a commander must deal with "subjective" reality in that there are as many sets of reality as there are soldiers in the organization. It is the soldier's subjective reality that I approached with this study = the soldier's view of his/her job and how these perceptions are associated with performance. Also, I am not proposing that my 18-item survey device is all-inclusive as to factors affecting a soldier's performance.

Response Level and Performance

As shown in Table 1, there is a high positive correlation between response level and performance. However a more detailed analysis (Tables 2 & 3) shows a considerable variation among disciplines, and within sub-scales, as follows. As to the response-performance correlation on each question, the Combat Arms (CA) discipline had significant correlations on 15 questions, Combat Support (CS) on 2 questions, and Combat Service Support (CSS) on 7 questions. This strong lead by CA carried into the response-performance analysis by sub-scale: CA correlations were significant in all sub-scales; CS in none of the sub-scales; and CSS in all but sub-scale Motivators. Therefore, considering the response level versus performance level of soldiers E-1 through E-4 in general, it is important for military commanders/managers to note the relationship between how soldiers view vital elements of their job and

how they perform. However, based on this research, the Combat Arms commander can be considerably more confident of the response-performance correlation than can his counterparts in the Combat Support and Combat Service Support branches.

Again, I emphasize to managers that a positive correlation between a response level and performance, or between a response level and AWOL does not imply a cause-and-effect relationship. It means only that these two variables follow a similar pattern of fluctuation.

In any case, I feel that the value of this study is that it will highlight to managers how soldiers' performance may respond to a change in the soldiers' perceptions of these 18 job factors, and the realization that the junior enlisted soldier generally perceives "satisfaction" aspects of his job as being either disregarded by his supervisors or at least given low priority consideration. I think the potential of this awareness and value to the manager obvious; assuming that he/she is capable of affecting soldiers' job perceptions.

Response Level and AWOL

I found a significant inverse relationship between Response Level and AWOL in all sub-scales but Expectancy/Valence. I think it very important for managers to note the correlation between the soldiers' (potential AWOLs) view of the "here-and-now" aspects of the job (Motivators, Relations and Hygienes) versus the relative lack of concern for expectations of the future (Expectancy/Valence items).

Performance and AWOL

The significant inverse relationship between AWOL and Performance is an expected finding in that while the soldier is AWOL he/she is obviously not performing on the job. However, commanders/managers should prevent operation of the "reverse Halo" effect where one instance of AWOL marks a soldier as a low performer. I submit that it is extremely difficult for a supervisor to give an unbiased performance rating to a subordinate who has once been AWOL—regardless of whether the AWOL occurred within the current rating period.

RECOMMENDATION

I recommend a replication of this study in a setting where the longitudinal aspects of change in soldier's perceptions and performance can be assessed in conjunction with attempted manipulation of these perceptions by their supervisors. For example, I would conduct one survey per month for one year. This longitudinal data would allow more extensive analysis such as cross-lag and other that can approach such questions as: How does a change in soldiers' perceptions affect their job performance and vice-versa? How effective are supervisors at affecting soldiers' perceptions?

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